

REMARKS

In accordance with the foregoing, claims 1-2, 25-26, 28-29 and 34-36 are amended and new claims 37-40 are added. No new matter is being presented, and approval and entry of the amended claims and new claims are respectfully requested.

Claims 3-11 are cancelled herein without prejudice or disclaimer.

Claims 1-2, 25-26, 28-29 and 31-40 are pending and under consideration.

Reconsideration is respectfully requested.

Rejections under 35 U.S.C. § 112, First Paragraph

In items 3-4 of the Office Action, the Examiner rejects claims 1, 2, 25-26, 28-29, and 31-36 under 35 U.S.C. §112, first paragraph. (See, Office Action at pages 2-5). In item 4 of the Office Action, entitled Response to Arguments, the Examiner asserts:

[R]atios of specificity and sensitivity do not have any terms relating to distance, nor are they a function of distance. Thus, it is unclear how these ratios are used to define an upper limit of distance.

(See, Office Action at page 5, lines 3-5).

Independent claim 1 as amended herein deletes the recitation of "the predetermined distance relation having been determined based on a sensitivity and a specificity that define an upper limit of the distance," to address the Examiner's concerns. Independent claims 25 and 28 are amended in a similar manner to address the Examiner's concern.

Applicant points out that independent claim 33 does not recite a ratio of specificity and sensitivity addressed by the Examiner.

Applicant submits that independent claims 1, 25, and 28 (and dependent claims 26, 29, and 32-35) recitations comply with 35 U.S.C. §112, first paragraph.

Conclusion

Thus, the rejection should be withdrawn.

Rejections under 35 U.S.C. § 112, Second Paragraph

In items 5-9 of the Office Action, the Examiner rejects claims 1-2, 25-26, 28-29 and 31-36 under 35 U.S.C. §112, second paragraph. (See, Office Action at pages 5-6).

I. In item 7 of the Office Action, entitled Response to Arguments, the Examiner asserts:

[P]arent claims do refer to multiple distances. For example, claim 1 recites "calculating a distance between a first gene and each of a plurality of second genes ...". According to claim 1, multiple distances are calculated between the first genes and a plurality of second genes. Thus, the parent claims of claims 2,

26, and 29 do have multiple distances, and it is unclear to which of these distances do the instant claims refer.

(See, for example, Office Action at page 5, line 19 - page 6, line 3).

Independent claim 1 is amended herein to recite " . . .determining a first gene expression site, based on the calculated distances," to address the Examiner's concerns. (Emphasis added). Dependent claim 2 is amended accordingly.

Independent claims 25 and 28 (and dependent claims 26 and 29) are amended in a similar manner.

II. In item 9 of the Office Action, entitled Response to Arguments, the Examiner asserts:

[R]atios of specificity and sensitivity do not have any terms relating to distance, nor are they a function of distance. Thus, it is unclear how these ratios are used to define an upper limit of distance.

(See, for example, Office Action at page 6, lines 17-21).

Independent claim 1 has been amended herein to delete the recitation of "the predetermined distance relation having been determined based on a sensitivity and a specificity that define an upper limit of the distance," to address the Examiner's concerns. Independent claim 25 and 28 are amended in a similar manner to address the Examiner's concern.

Applicant points out that independent claim 33 does not recite a ratio of specificity and sensitivity.

Conclusion

Applicant submits that independent claims 1, 25, and 28 (and dependent claims 26, 29, and 32-35) recitations address the Examiner's concerns and comply with 35 U.S.C. §112, second paragraph. Thus, the rejection should be withdrawn.

Rejections under 35 U.S.C. §101

In items 10-12 of the Office Action, the Examiner rejects claims 25, 26, and 35 under 35 U.S.C. 101. In item 12 of the Office Action, the Examiner asserts:

[T]he instant claims may still be drawn to computer readable medium such as carrier waves, which are non-statutory per se. Thus, the instant claims remain non- statutory.

(See, for example, Office Action at page 7, lines 15-17).

Independent claim 25 as amended herein recites " computer-readable storage medium encoded with a computer program, including computer executable instructions (emphasis added). The specification defines a computer-readable storage medium as:

The program is stored in a computer-readable storage medium such as a

HD, a FD, a CD-ROM, an MO and a DVD, and is read out of the storage medium by a computer to execute it.

(See, for example, page 20, liens 2-5 of the specification).

Applicant submits that one of ordinary skill in the art, especially in view of the specification, would not broadly interpret the recited computer-readable storage medium to include "carrier waves," as the Examiner asserts.

Applicant submits that independent claims 1, 25, and 28 (and dependent claims 26, 29, and 32-35) address the Examiner's concerns and comply with 35 U.S.C. §101.

Conclusion

Thus, the rejection should be withdrawn.

New Claims

Claims 37-40 are presented to recite features in a different manner. Dependent claim 37 recites a method according to claim 1, "wherein the predetermined distance relation is determined based on a sensitivity and a specificity, the sensitivity indicating a ratio of expression sites predicted to expression sites previously determined that it is where the unknown gene expresses by another method, and the specificity indicating a ration of expression sites are predicted to expression sites previously determined that it is where the unknown gene never expresses by another method, and a cross-point distance between the specificity and the sensitivity defines an upper limit of the distance."

Claim 40 recites a method performed by a processor for predicting a gene expression site, including "calculating distances between a first gene and each of a second gene and a third gene on a genome sequence and having known expression sites; extracting the expression sites of the second and third genes from a database; determining a first gene expression site based on the calculated distances as a selected gene expression site of at least one of the second and third genes that has a predetermined distance relation with the first gene that is determined based on a sensitivity, indicating a ratio of expression sites predicted to expression sites previously determined as where first gene expresses by another method, and a specificity, indicating a ratio of expression sites that are predicted to expression sites previously determined as where the first gene never expresses by another method, and a cross-point distance between the specificity and the sensitivity defines an upper limit of the calculated distances; and outputting on a display the determined first gene expression site."

Support for the new claims is found, for example, in page 16, lines 5-14 and page 18, lines 3-16 of the specification. No new matter is presented in any of the foregoing and,

accordingly, approval and entry of the new claims are respectfully requested.

These features of claims patentably distinguish over the art of record, and they are submitted to be allowable for the recitations therein.

Conclusion

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

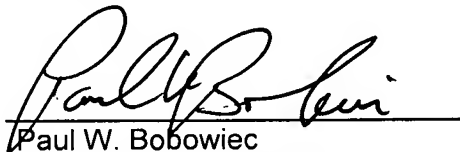
Respectfully submitted,

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Date:

February 20, 2009

By:



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